POSSIBLE EVIDENCE OF GLOBAL WARMING FROM THE EARLY EMERGENCE OF BUTTERFLIES ON THE ISLE OF WIGHT

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FOR THE LAST eleven years it has been the norm to have mild winters and warm early springs and possible evidence for "global warming" can be shown by the increasing early dates of emergence of our spring butterflies. The years 1989, 1990, 1994, 1997, 1998 and 1999 all experienced such forward springs when eight or more species of butterflies were out by the end of March. In 1997 there were ten species noted before the end of that month and in 1999 twelve out of the thirteen species were recorded in this period which is quite exceptional.

For the last three years this early season continued well into April and 1997 was an exceptional year (Knill-Jones, 1998). *Pyrgus malvae* L. was seen on Afton Down on 10 April in 1997, 8 April in 1998 and 11 April in 1999. *Cupido minimus* (Fuessl.) was seen very early on Afton Down on 29 April 1990 and 27 April 1997. The earliest ever record of this species in England was at Ballard Down, Dorset on 24 April 1945.

On 24 March 1999 there was a freak, but genuine, sighting by Pauline Peach of *Pyronia tithonus* (L.) on the railway line at Ryde. This happens to be the earliest ever sighting of this butterfly in the British Isles which usually emerges in July. The previous earliest record was on 30 May in Warwickshire.

There were two migrant butterflies recorded before the end of March, being *Vanessa atalanta* (L.) and *Cynthia cardui* (L.). A number of sightings were noted in January and this supports the recent theory that these two species hibernate in southern Britain during mild winters.

Table 1 gives the dates and localities of the thirteen species seen before the end of March.

I have obtained similar evidence by studying the early emergence and late partial second and third broods of our moths (Knill-Jones, 1999). A further study over the next decade will help to either enhance or dispel the theory of "global warming" which I feel sure by the evidence collected is with us to stay.

Acknowledgements

I should like to thank Barry Angell for checking and amending my list and for reading and commenting on the manuscript and Dr David Biggs, Denis Britton, Andy Butler, Simon Colenutt, Norman Holland, Pauline Peach, Ian Rippey, Brian Warne and others for their invaluable records and information which has helped me in writing this paper.

References

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Table 1. Dates and localities for thirteen butterfly species seen on the Isle of Wight before the end of March, during the period from 1989 to 1999.

Year	*Inachis io* L.	*Aglais urticae* L.	*Gonepteryx rhamni* L.	*Polygonia c-album* L.	*Pieris rapae* L.	*Pararge argeria* L.
1989	10.ii Parkhurst	20.ii Parkhurst	26.iii Parkhurst Gurnard	8.iii Cowes	26.iii Gurnard	26.iii Calbourne
1990	21.ii Luccombe	22.ii Freshwater Luccombe Firestone Copse	5.ii Binstead	22.ii Luccombe Firestone Copse	17.iii Freshwater	15.iii Queens Bower
1991	1.ii Newtown	7.iii Freshwater Lake	7.iii Porchfield Parkhurst Shalfleet	7.iii Shalfleet Parkhurst	9.i Niton	12.iv Porchfield
1992	10.i Ventnor	27.ii Freshwater	15.iii Locks Green	27.ii Fort Victoria		8.iv Havenstreet
1993	14.i Brading	13.ii Freshwater	10.iii Cranmore	9.iii Freshwater	18.iii Bonchurch	6.iv Freshwater
1994	28.ii Newport	29.i Mottistone	2.iii Sandown Firestone Copse	17.iii Firestone Copse	11.iv Lake	26.iii Freshwater
1995	9.iii Macketts Land	2.ii Binstead	10.iii Gurnard	12.iii Freshwater Binstead	29.iii Macketts Land	4.iv Freshwater
1996	28.ii Macketts Land	10.i Arreton	29.iii Binstead	17.i Ventnor	17.iv Totland	21.iv Gurnard
1997	13.i Carisbrooke	16.i Solent	2.iii Binstead	6.iii Yaverland Firestone Copse	10.iii Binstead	27.iii Freshwater
1998	8.ii Binstead	10.i Binstead	13.ii Firestone Copse	13.ii Firestone Copse	19.iii Lake	20.iii Freshwater
1999	1.i Osborne	4.i Arreton	13.iii Freshwater Osborne	13.iii Alverstone	17.iii Binstead	27.iii Freshwater

Celestrina argiolus L.	*Pieris napi* L.	*Cynthia cardui* L.	*Vanessa atalanta* L.	*Pieris brassicae* L.	*Anthocharis cardamines* L.	*Pyronia tithonus* L.
28.iii Freshwater	7.v Porchfield	24.v Redhill	Early Jan. Ventnor			
18.iii Cowes	17.iv Shalfleet	12.iii St. Lawrence	8.1 Mottistone		1.iv Gurnard	
10.iv Gurnard	13.iv Alverstone	22.iii Tennyson Down	21.iii Porchfield	13.iii Town Copse		
9.iv St. Helens	11.iv Havenstreet		18.i Chale Green			
18.iv Binstead	26.iii Landslip		29.i Bonchurch Shute			
	26.iv Parkhurst	13.iv Cranmore	28.i Parkhurst			
8.iv Ryde		4.ii Luccombe Down	2.ii Firestone Copse	25.iii Ventnor		
15.iv Gurnard	20.iv Alverstone	18.iii Arreton	12.i Cowes			
20.iii Freshwater	13.iv Freshwater	19.iv Arreton	15.i Gurnard		27.iii Gurnard	
17.iii Firestone Copse			6.i Gurnard			
25.iii Cranmore	17.iii Alverstone	5.i Whitwell	23.i Alverstone	31.iii Niton	4.iv Gurnard	24.iii Ryde railway line